Seabird Colony Protection Program Workshop Summary Notes

November 3, 2005

Seabird Colony Protection Program Overview

The Seabird Colony Protection Program is one of the projects funded by the *T/V Command* Oil Spill Restoration Fund. The *T/V Command* had a minor accident while anchored in the SF Bay. Around midnight, and only 15 miles off the San Mateo County coast, it began draining the previously damaged tank, which resulted in the release of oil. This release was not reported. U.S. military aircraft followed an oily sheen trail to the vessel off the Guatemala coast, where it was intercepted by the U.S. Coast Guard. Oil samples from the small accident in SF matched the *Command* to the mystery spill off the San Mateo Co. coast.

The successful prosecution of the Command vessel operator and owners and the recovery of natural resource damages mark the first time a tanker vessel has been caught illegally dumping oil in California. Common Murres, Marbled Murrelets and other seabirds were killed and many miles of beaches were lightly oiled. These damages spurred the formation of the T/V Command Oil Spill Natural Resource Trustees. The Seabird Colony Protection Program (SCPP) is overseen by the Natural Resource Trustees. GFNMS is taking a lead coordination role is the SCPP. The primary goal of the SCPP is to improve the survival of California's seabird species, such as Common Murres, Brown Pelicans, and cormorants by reducing human disturbances at their breeding and roosting colony sites from the Big Sur Coast to Point Reyes, working in collaboration with other Sanctuaries, agencies and organizations. Project objectives include: 1) Increasing seabird disturbance information exchange to key events/venues; 2) Increasing awareness of organized users who impact nesting and breeding seabird colonies, including fishing association events, air shows, boat shows, and dive venues; 3) Increasing Central Coast seabird protection coordination between agencies, non-governmental organizations, and interested public; and 4) Increasing the number of agencies, non-governmental organizations, and interested public reporting incidents of seabird disturbance.

Presentations

Overview of Central Coast Seabird Colonies & Current Human Disturbances

Gerry McChesney – Wildlife Biologist, USFWS, Common Murre Restoration Project

- Common Murre Restoration Project began in 1996 to restore Common Murres (COMUs) colony on Devil's Slide Rock using social attraction.
- Goal was to have 100 breeding pairs, which was reached in year 6.
- Project also monitors COMUs and Brandt's Cormorants (BRACs) at Point Reyes and Castle/Hurricane Complex.
- In the early years of the project, observers noticed disturbance issues from aircraft and boats, which were appearing to impact the colony. Due to dense nesting, a disturbance affects the whole colony.
- COMUs not only attend the rock during breeding, but also in non-breeding. This calls for protection all year. High site fidelity; so do not establish new breeding colonies.
- BRACs also affected by disturbance. BRACs also need roosting all year round.
- Brown Pelicans (BRPEs) do not breed here, but roost on coastal rocks and are susceptible to disturbance too.
- Observations show 3 types of disturbance: aircraft, boat, and humans on foot. Ramifications: Pre-breeding disturbance can have more of an impact because adults are not tied to the site.
- Behaviors that indicate disturbance: head-bobbing, displacement, flushing.
- Castle Hurricane colony had the highest number of flyovers, and also the highest percentage of disturbance from 1997-1999 between all 3 sites. At Devil's Slide and Pt.Reyes, more of the disturbance consisted of head bobbing than flushing. The majority of flyovers at Castle Hurricane were helicopters, which also caused the majority of the disturbance. Most of the disturbance from a plane causes head-bobbing, whereas helicopters cause flushing
- Boat disturbance was higher at Castle Hurricane and Pt. Reyes than at Devil's Slide.
- Helicopters and boats were often Coast Guard/search and rescue events.
- Helicopter disturbance, 2001-2005. Castle Hurricane helicopter activity and disturbance has reduced, whereas Devil's Slide has increased.
- Plane disturbance, 2001-2005: Number of plane flyovers and disturbance increased at Devil's Slide.

- Boat Disturbance, 2001-2005: At Castle Hurricane, after 2000 the numbers have decreased due to the rockfish fishery closure and work with Fish and Game. At Devil's Slide the number of boats is increasing. At Devil's Slide there was a big increase in 2005 from motorboats and kayakers.
- The project has been sending out a letter before the breeding season to try and reduce disturbance.
- At Farallon Islands a flight path has been established for Coast Guard.

Q & A Session:

- Q: Can you speak to the level and magnitude of predation on eggs during disturbance events? A: It has not been that high; during the rockfish fishery disturbances at Castle Rock it was the higher, but during aircraft disturbances, the predation has not been that high. It is somewhat dependent by the length of the disturbance.
- Q: Does the head bobbing prevent any colony activities, or is it just an indicator of flushing? A: It seems to be the precursor for flushing, however all activity does stop. Head-bobbing events only seem to last 10-15 seconds.
- Q: Do you have the chance to habituate the colony to helicopter sounds with your speakers? A: No. Interesting Idea.
- Q: Public relations problem: hard to impart to the public that flushing birds is a serious disturbance. What is the real consequence? We need to help people understand that these seabirds live by a boom and bust cycle. They have to get the reproduction in that year. We need to try and impart the biological realities that flushing is a huge impact.
- Q: Do you have any data on types of disturbances and approach distances? A: Yes, we record any aircraft and type of aircraft at or below 1000 feet, and record boats within 1500 feet. Average aircraft disturbance is below 750 feet. Boat disturbance is mostly sport fishing boats and kayaks; no sailboats.
- Q: I am surprised at the distance shown in the photo, that the 3 kayakers caused a disturbance. A: At Devils's Slide, when the boat comes between the rock and mainland it elicits a response.

David Gardner – Marine Outreach Coordinator, PRBO Conservation Science

- Population trends of colonies that PRBO works on: off-shore populations are decreasing and nearshore populations are increasing. This leads to the problem of human disturbance.
- 2 types of disturbance: indirect and direct.
- On the Farallons, 36% of aerial violations cause disturbance and 21% of watercraft violations cause disturbance. This seems to have a more significant affect during El Nino, so maybe when there is other added pressure there is more of an effect.
- On Alcatraz in 2004 there was a notable decrease in disturbances, perhaps due to successful outreach program by the Park Service to an aircraft company that frequently does flyovers. Most of the disturbances are marine-based. Most are minor.
- On Alcatraz in 2004 there were more major disturbance events. The big reduction is in moderate reactions, which could be due to habituation.
- PRBO released a California Current Marine Bird Conservation Plan, and a brochure "Seabird Aware", and a flyer "Reduce Night Lights". Can be found on the website.
- Conclusions: Most visitors keep a respectable distance, and most disturbances are unintentional. Outreach can potentially reduce disturbance, although some show blatant disregard. We need smart outreach, targeting specific user groups and audiences. We need an effective method of law enforcement and penalties.

Q & A Session;

- Comment from Gerry McChesney: I would agree with you that during an El Nino event, such as in 2003, which was a minor El Nino, the birds at Devil's Slide seemed more jumpy and prone to disturbance, as well as this year with the abnormal oceanic conditions.
- Q: When these aircraft flushing events occur, do they equally flush the seabird predators such as ravens? Do they stay away as long as the seabirds? A: Gulls tend to come right back. Murres tend to fly around and eventually come back, but sometimes when a boat stayed in the area the colony stayed off the rocks the whole day. The ravens and the Peregrines don't seem to be as affected by the

disturbance. Gulls seem to be less susceptible to flushing. Gulls are better flyers and more capable from getting away from a disturbance than a COMU or BRAC.

- Q: At Pt. Reyes I have seen two types of disturbance that you did not allude to: ultra-lights and surfers coming in by boats. Have you documented these types of disturbances? A: We were worried about an ultra light company setting up around Alcatraz but that was discouraged and did not end up happening. A: We were watching out for that this year at Pt. Reyes. This year we did not see any ultra-lights, although the weather was not great for ultralights. At Drake's Bay, on one occasion we saw a boat come in and drop off surfers, but it did not cause a disturbance.
- Q: I am interested to know how the brochures that PRBO produced were distributed. A: When we had funding they were widely distributed, but we ran out of funding and only have one box left. We are seeking funding, so hopefully can get more printed.
- Q: Have you had any backlash to your outreach efforts? Do people say that researchers also cause disturbances? A: From talking to visitors on Alcatraz people do talk about researchers causing disturbances. We have a permit and know which areas to avoid, and how to approach the birds in as unobtrusive manner and possible.
- Q; We all assume that disturbance causes impacts, but have either of you been able to quantify any actual impact? A. Yes, during the COMU disturbances at the Castle/Hurricane colony during the rockfish fishery impacts. We saw chicks pushed into the water too early, which means that they would not survive, as well as eggs getting pushed off the cliff. At Devil's Slide we don't have direct evidence but the disturbances combined with the oceanic conditions caused BRAC to not nest this year. We have been able to see affects such as gulls predating nests with abandoned nests.
- Q: Relative to the winter attendance, is it in masse or only small numbers here and there? A: It varies. Devil's Slide seems to have more winter attendance than other colonies, but it seems to vary from a portion of the colony to the whole colony. It is rarely just a few birds.

Regulations, Enforceable Seabird Disturbance Laws, and authorities

Ted Beuttler, NOAA General Counsel, Seabird Protection under the National Marine Sanctuaries Act

- Primary objective of the National Marine Sanctuary Act is resource protection. The Sanctuary attempts to facilitate other activities that are do not interfere with this goal.
- Enforcement: Search and Seizure, civil penalties, criminal liability only for interference with enforcement.
- Civil Burden of Proof: Preponderance of evidence.
- NMSA monetary fines manage and improve the Sanctuaries.
- Review of elements of GFNMS prohibitions regarding seabird disturbance: definition pertains to motorized aircraft and certain requirements (See Handout: Overview of Laws and Regulations that Address Human Disturbance to Seabirds).
- Review of elements of MBNMS prohibitions regarding seabird disturbance. Sanctuaries designated more recently have a more current approach. Defines "take" for both listed and unlisted species (see handout).
- Harassment: you need to show animal behavior and how it changed due to activity.
- In the future, it would be nice to see more uniform "no take" regulations along the 3 central California sanctuaries.
- Education is a key component to get compliance.

Chris Bandy, US Fish & Wildlife Service Law Enforcement, San Francisco Bay NWRC

- What does it take to get someone prosecuted for violations, if it was a violation? If someone disturbs birds, what law can be enforced? (See Handout: Overview of Laws and Regulations that Address Human Disturbance to Seabirds)
- Under Migratory Bird Treaty Act, you have to prove "take" to be in violation. "Take" is harmed or killed.
- There are a number of steps to get a case, including documentation. The "marathon case" took years to prosecute the pilot for knowingly disturbing the birds after being warned.
- The National Wildlife Refuge system has it's own set of laws that can be applied.

- An outreach program can be used to show that a person did know they should not be doing an activity. Outreach is more important than enforcement. You need to be able to show that someone has been informed and/or warned.
- In the ESA, the word "take" is defined differently, which can help with listed species. The word "harass" is added in the ESA. A harassment is usually something that occurs more than once.
- Under the Airborne Hunting Act, it says you can't "harass". This law only applies to aircraft.
- There is a new MOA signed by NOAA, NMFS, NPS, and USFWS to be able to use multiple agencies to work together at a federal level.

Q & A Session:

- Q: Are there any GFNMS regulations for unmotorized aircraft? A: No, currently the GFNMS regulations pertain to motorized aircraft only. MBNMS has a broader regulation.
- Q: Are the designated boundaries on aircraft charts? All pilots reference these maps, and if they were on there, they could no longer claim to be ignorant of these zones. A: They do not have the areas on the maps, they just have advisories. FAA has been extremely resistant to putting these on the maps. FAA is claiming that the charts are so loaded down with other info that it is too difficult to use. Therefore, pilots claim that they don't know they're violating the regs. We should address this further and push the FAA to get these on the charts. Pilots do not care about our regs, but if you talk about FAA regs, then they are concerned. FAA primary role is for safety, not wildlife. They want room on the charts for pilots safety issues only. MBNMS has been trying to battle this for 10 years, How do we form a coalition to tackle this? In the CINMS we have successfully settled cases without it being on the charts. They have agreed to post that USFWS encourages planes to fly above 1000 feet in sensitive areas, but the areas themselves have not been shown.
- Q: Since the penalties have been civil, have the Sanctuaries been able to do much with the violations that have been pursued? A: Most of the money has come out of damage assessment, which is a different source. The civil amounts have sometimes gone back to the sites, but I am not sure what the amounts have been. It would be nice to be able to track the monetary settlements that have been gotten over the years. For harassment, I cannot remember any settlements in GFNMS and MBNMS. For over flight regs, MBNMS has not prosecuted anyone, mainly due to the problem with the charts. The charts say 2000 feet recommended. To get around this, we keep a record of the letters that went out that proves that they were notified. A lot of the pilots once they are contacted are pretty contrite and do not have a subsequent disturbance.
- Q: You talked about the future and the discrepancy between the regulations of the 2 Sanctuaries. Can you talk about where the program is going with the Management Plan Review and how we are trying to solve this problem? A: The three central coast Sanctuaries are involved in the Joint Management Plan Review. They are looking at the regulations and looking at what is appropriate. We are still developing the draft plan and the environmental impact statements. The Sanctuary Advisory Councils have been very involved in the process.
- Q: Similar to the no-fly zoning, there has not been any discussion of boat disturbances. Are there regulations anywhere in the program that deals with boats? A: In MBNMS it has a broader application, it is not tied to motorized aircraft like GFNMS. In MBNMS there are some zoning, such as jet skis. There is a state reg for boats 300 feet around the Farallons. FKNMS does have zones and regs that pertain to boats. That would be a good site to look to for precedence. In CINMS there is areas to protect BRPE.
- Q: In trying to attempt to bring the FAA to the table how about using their responsibility within the ESA? A: It is interesting angle that we have not pursued in the MBNMS. In Oregon the National Wildlife Refuge system was able to get offshore rocks on the pilots maps. MBNMS is putting Sanctuary regs into the Coast Pilot.
- Q: Does BLM have an elevation related violations like NMS? A: No. The Refuge Improvement Act from 1997 is the statute with the NWR system. It would help if the regulations were similar, since the public does not know when they are passing into a different area of jurisdiction.
- Q: Do any of these regulations apply to impact from lights? A: I think under the ESA yes. For a Sanctuary, it would have to be shown that the disturbance was occurring in the Sanctuary, not high up on the rocks.

Success Stories

Reduction of Human Disturbance to Seabirds: Success Stories in Oregon
Roy Lowe, Project Leader, Oregon Coast National Wildlife Refuge Complex

- Oregon Coast National Wildlife Refuge Complex has diverse habitats including rocks, reefs and islands.
- There are 1.2 million nesting seabirds, 40k murres nesting on 3 rocks.
- Goat Island first in Oregon NWR.
- 70% of all murres south of Alaska, close to human use area. Mixed species colonies, 3 cormorant species, 4-7,000 pinnipeds of 3 species, and largest Steller sea lion colony outside Alaska.
- Hwy 101 immediately adjacent to seabird colonies. Aircraft do low overflight over area. Vessels also do approach close to sensitive habitats. Even small-scale disturbances can become cumulatively bad. Near Newport masses of visitors tide pool in the area, schoolchildren and others cause trampling and Marine mammal disturbance.
- The agency works closely with BLM and now requires tide pool permits. Colony Rock had recolonization on headland. Visitation (human) quadrupled, but were controlled by confining to trails, and areas set up for appropriate public use. Nine new Brandt's Cormorant colonies have formed since BLM partnership. Also, by making Blast Rock inaccessible (dynamite the access to the rocks) people were kept off. Tufted Puffins also recolonized small rock in six weeks. Brandts and Doublecrested Cormorants also now nest.
- Three Arch Rock NWR also saw disturbance, mainly by boats. Ocean Policy Advisory Council established a buffer zone, observed with spotting scopes from afar, recorded 68 watercraft and 100 aircraft disturbances. May 1 – September 15 off limits season. Used can buoys (USGS donated Gillmlan buoys) and they are deployed annually, then removed annually. Now Bald Eagles are disturbing the seabirds, instead of boats and aircraft some years.
- Created poster and panel to warn of 500 feet buffer around cliffs, islands and rocks. Very large, simple titles get message across. "Stay 500 feet from wildlife" and "Protect Marine Life."
- Special pilot's poster was developed, using Tufted Puffins as "poster bird" because it's attractive species.
- Will start Seabird Disturbance brochure soon, extending into California beyond Redwood Curtain.
- Special outreach teams on site use scopes, all students must visit stations (inverts, geology, etc.).
- Constant vigilance, but also city ordinance declared rock climbing illegal and aids in enforcing.
- Important to use positive message on interpretive panels, aided by a friend's group.
- Now recruiting through volunteers.gov, provide with binoculars, scopes, and reward with free RV spot in state parks.
- Personal contacts and conversations are more effective than signage. Soon will have programs in five sites along the Oregon coast.
- Some beach restoration was needed, but building trails has terminated trespass problems.

Success with S.E.A.L.S. and Other Education and Outreach Opportunities
Carol Preston – Education Coordinator, Gulf of the Farallones National Marine Sanctuary

- Sanctuaries: Education, Research, Conservation, Stewardship.
- Learning is a continuous process. First build awareness, then knowledge, change behaviors and foster stewardship.
- Disturbance came from three main groups: clam harvesters, motorboats, and kayaks. Clammers were very receptive to flagged buffers, docents and spotting scopes. Kayakers needed a different approach; outfitters and vendors were used to distribute packages of placards and other materials. Kayakers responded and disturbance dropped dramatically. Behavioral monitoring was done, and motorboats emerged as the biggest problem.
- The 7-year program used volunteers, who also became advocates for non-invasive wildlife viewing on the rookeries and out in the community. Agency partnerships also contributed to the success.
- These collaborations will also benefit the Seabird Colony Protection Program.
- Biggest issues: 1) identify target groups that cause the problems; 2) find materials that can carry the message, e.g., maps, charts, pictures; 3) identify venues for outreach that reach target group.
- Basic awareness is the fundamental issue to address, and use "smart" outreach.

Q & A Session:

- Q; BLM: Invasive species also impair colonization; is this a major issue? Rats and others are examples. A: (Roy): Red foxes, Bald Eagles, and others impact; they are applying for a environmental impact study to examine issue. This needs to be addressed, and is a growing issue though not bad now. Nonnative Vegetation: there is little human access, so not a big problem.
- Q: Economic impacts: have these been examined? Not at present, but ecotourism may replace some declining industries. No site-specific study has been done to date.
- Q: How did you determine a 500 foot buffer? A: Intelligent guesswork at first, preferred 1,000 feet, but fishermen objected and they cut back. They used laser device to track a disturbance record and 500 feet was established based on data.
- Q: Role of enforcement? How much does USFWS work with Oregon State? A: Volunteers, "smoke and mirrors" but will have enforcement zone officers soon. Badges more effective than patches.
- Q: Funding source for roads, panels, etc.? A: Wherever we can find it. Tap external and internal funds. Amenities have helped with education, such as viewing decks.
- Q: SEALS showed different disturbance distances, 50 – 600 yards could trigger a flush. Kayaks came closest and caused highest flushes. Habituation occurs, colonies vary in response.
- Q: Was it a difficult process involved in buoy placement? A: No strong objections were met. The USCG cooperated. Special permits were needed.
- Q: What did Oregon do to reduce plane and helicopter impacts? A: They fly with the pilots and make strong friendships with the USCG. Work with the Flight Safety Officer and point out danger to plane from flying through flocks of birds in $42 million craft.
- Q: Buoys are placed only during sensitive seasons? A: sensitive seasons mirror weather patterns. If folks want to go there in winter in rough seas, they're welcome to.
- Q: Shoreline use is not being addressed in California, just offshore habitats. What about spot colonies on cliffs, the overall impact? Public access in varied habitats (clifftops, reefs) needs to be addressed. A: Cormorants come right up to viewing areas in Oregon. State Parks closed some trails, gulls moved in right away. Lots of possibility for mainland sites.
- Q: Kiteboarders can bring kites close to habitat, increasingly in Northern California. Any reports of disturbance? A: They generally avoid the rocks, because of hazard and rocks block the wind.
- Contact Roy Lowe for copies of the posters on avoiding human disturbance.

Roundtable Discussions

Group 1

Question: *What are the three most significant disturbances to seabirds?*
Answer: If geographic scope is the outer coast: Aircraft, motorized boats, kayaks, foot traffic (Pt. Reyes)
Type: Incidental to other activities, education can address these issues
What message? How do we convey distances? - Flags, Buoys, Markers?
Critical messages: Establish that a flush is not normal; it is a problem and has consequences to colony. In the short term, the seabirds can lose one breeding season. Long term or repeated disturbance can cause colony abandonment. Cumulative small impacts impart scale.
Advice: Base all actions, regs (laws, acts, site regs) on DATA. Get it if it's not current/available.
Deliver messages several ways: Advise of regulations; Educate on life history and species; Educate on historic site usage; Develop stewardship ethic; Use Multiple languages.
Methods: Videos, literature, visitor centers, field trips
Explain what is normal bird behavior: Give examples of not normal; give distance parameters; give alternative opportunities; tailor to different audiences, awareness levels
To address fishing boat impacts: determine closures, possibly seasonal; give supporting reasons; sometimes no option available: couple with easily read materials: state humane reason, state consequences/fines
To Address Overflights:
Different user groups, different venues:

- Civil airports: tie into GIS coordinates, pilots use
- Military/govt: different rules apply
- **"Flight Room" = airport center where flight plans are filed:** Use for messaging: "Bird strike" message may/not be valid, but single engine planes vulnerable w/ some bird species

- Be aware that "Heartland" pilots might not appreciate coastal issues.
- Form partnerships with USCG and military; befriend Op's Commander for continuity.

Question: *What management strategies should be explored (such as regulatory measures, buoys, best management practices, volunteer and/or seasonal closures, etc.).*

Answer:

Regulatory:

- Gap analysis of existing regs is needed.
- Review consistency of language (agencies) e.g. different definitions of "take"
- Hard to get multi-agency consensus on approach distances, etc., long and arduous process
- Most sensitive areas are in some agencies' jurisdiction, some cover land, some water, cross-deputize
- Enforcement staff: keep simple, enforce across jurisdictions
- Focus on worst abusers, prioritize need
- Ask the following questions: How easily can craft be identified? How easily can craft be traced to land? Where is monitoring occurring? What is being undetected?

Get the Data: 1) Compile known data sets (PRBO, State parks); 2) Scale activities to disturbance sources; 3) Monitor for effectiveness: (i.e. a decrease in disturbance or increase in colony productivity); and 4) Use data sets to identify the problem and tailor the message

Advice for Technical Advisory Committee

- Research/monitor approach
- Enforce current regs, develop new regs
- User groups to be consulted (buy- in), make Working Group, not TAC
- NEPA (public process) may be needed if changes are proposed (not for monitoring)
- May need permits for buoys (or exemption)
- Loopholes need to be identified
- You have to work with FAA/use nautical charts/Nobletech

Question: *How do you know that you are reducing disturbance?*

Answer:

Evaluate disturbance reduction

- Measure numbers, productivity and change in distribution
- Determine "cause and effect" or coincidence
- ID other contributing factors to success or failure
- Ecosystem approach- impacts of anomalies- zooplankton "bust" coupled with human impacts
- If ecosystem analysis is not feasible, go for simplest solution (reduced human disturbance)
- Productivity in sample quads
- Observed human disturbance

Group 2

Question: *What are the three most significant disturbances to seabirds?*

Answer:

Aircraft:

- Outreach will be very different for each type: Agency/military/CG, Private Planes, Fixed wing vs. helicopters, Media helicopters and Film crews
- One solution can fix all: need to get on FAA map, need to get changed to "recommended"
- Other solution: outreach, no assist airman (NOTAM), electronic devices on board

Critical messages:

- Simple, highlighting valuable resources, using images that public will respond to
- **Distance recommendations need to be consistent** (does become difficult from political aspect)
- Make public understand WHY these seabirds are important

Questions: *What management strategies should be explored? What information gaps need to be addressed from a monitoring perspective?*

Answer:

Gaps and Needs:

- Gap: assessment of public knowledge (go to different interest group meetings, neighborhoods, etc.)
- Needs: 1) Uniform regulations: Fish and Wildlife Service, Sanctuary, Fish and Game; 2) White paper about all regulations (SCPP working group should review and comment); 3) Regulations on air nautical charts.

Public Process:

- Bring data to a public forum
- Involve public interest groups
- Field tours for non-science people i.e. policy makers, special interest groups

Other methods for public process:

- Speakers forum
- Observation decks, lookouts (pullouts)
- Docents specific for seabirds out in field, at observation areas, etc.
- Buoys, signage, changing/closing walkways (Get funds by starting an 'adopt a buoy' program)
- Hands on physical improvements

Technical Advisor Committee:

- Committee needed to make management recommendations
- Involve user groups in implementing management strategies- like Team Ocean in Florida Keys
- TAC's can help getting buoys placed
- Coordinated management needed with sub-committees for different issues
- Guidelines for responsible human behavior

Group 3

Question: *What are the three most significant disturbances to seabirds?*

Answer:

Most significant disturbances to seabirds

1) Kayakers and other non-motorized recreational uses (e.g. surfers, kitesurfers)
2) Aircraft
3) Motor craft (fishermen using lights plus general vessel traffic)
4) Foot traffic

Critical messages

- "You may disturb what came to see"
- Birds do more than fly- this is their home and they need space
- Your disturbance now may have impacts for years to come (e.g. eggs will break and chicks will be killed, can lose entire generation)
- "Only you can prevent colony lose"
- These rocks are special resting/nesting space
- Everyone's responsibility to protect them
- "Make this rock a no flush zone"

Best venues

- Kayak association
- Schools- teachers and kids
- Sport supply stores (REI) & rental facilities, e.g. pamphlet, DVD or CD with kayak
- Equipment manufactures to print info
- Online message boards (rec. fishing alliance)
- Harbors
- Charter boat naturalist training
- Aquariums, museums, nature centers
- Permanent signage
- Docent programs at scenic pull offs
- Signs, buoys right at colonies
- Find out access points and launch sites, put up signage at these places
- Print on brochures that info can be shared and available for websites
- Airshows: contact event organizers and provide info in registration packet
- Flyers with fishing licenses/regulations
- Fish and tackle shows
- Boat shows
- People (volunteers on the water)

Approach media:

- Kayaker magazines
- In flight magazines
- Airline videos of protecting our resources
- Coastal living
- Sunset magazine
- National Geographic Explorer
- AAA
- Outside
- Ranger Rick
- Western Outdoor News

Question: *What management strategies should be explored (such as regulatory measures, buoys, best management practices, volunteer and/or seasonal closures, etc.)?*

Answer:

Management strategies

- Zoning by use, season, year, demarcate using buoys- set up appropriate regulations and policies
- Work with Fish and Game Wardens to do seabird patrols
- Monitoring effectiveness of management strategies by working with law enforcement (fast response)
- Agreements (MOUs) between agencies
- Provide contact and response list to field biologists, agencies and law enforcement
- Train biologists/managers/volunteers on the response process

Question: *How do you know that you are reducing disturbance?*

Answer:

Reducing disturbance

- Get Baseline data: Wildlife- systematic analysis of roosting/nesting loss, human use, human perception (e.g. professionally designed surveys)
- Record # incident reports
- Compare pre-post human perceptions
- Monitor # disturbances at colonies
- Determine if economic gain can be demonstrated?
- Use Telepresence- video surveillance – monitoring
- Perform Long-term seabird population studies, data
- Track oceanographic conditions (El Nino, upwelling strengths)
- Master plan needs to be developed (do this for all aspects, education, enforcement, etc.):
    1) Where are colonies- roosts
    2) Prioritize which colonies to focus on
    3) Disturbance minimization strategies
    4) For each colony, what are main disturbances
    5) Cost

Question: *What information gaps need to be addressed from a monitoring perspective?*

Answer:

Gaps

- Determine levels of disturbance and impacts of each disturbance type (need this for enforcement)
- Determine Cause-effect
- Address key motivators: Societal pressure, reward, punishment
- Pool knowledge (TAC)
- Inventory who was doing what related to disturbance
- Determine level of monitoring for each site- some may not be monitored at all
- Seek partnerships for enforcement

Group 4

Question: *What are the three most significant disturbances to seabirds?*

Answer: lights, noise, anthropogenic (pets. people, rats), planes and helicopters (fixed wing not as great), marine, foot traffic.

- Marine: kayak, party boat, recreational fishing, commercial fishing- squid boats
- Foot: relatively insignificant, can be most severe, effects may not be known

Who to target?

Helicopters- Coast Guard (needs to be annual), try to fly with CG operations officer, CHP, Military (unidentified), Private/commercial/media.

Message

- Publicize convictions
- Awareness of areas, sensitive species
- Guidelines ¼ - ½ mile, offshore, above 1,000 ft in air
- Birds react to sound, not only visual

Restrictions- other pilots have to abide, show by example

Venues

- Film boards
- TV stations/traffic (send annual letter)
- Coast Guard command
- Aeronautical charts
- Air shows- maybe develop poster
- When renew registration send letter
- Use power of collective multi-agencies in dealing with FAA
- Airports

Question: *What management strategies should be explored?*

Answer:

- CA equivalent is CA Coastal Monuments that manages offshore rocks- Partnerships (BLM wants to adopt what Oregon has done)
- Recreational Fishing Alliance, Coastside Fishing Club: need to target/work with large member base
- Use the monuments as a vehicle to connect groups/agencies
- Overlapping jurisdictions- need coordination
- F & G has obligation under MOU w/BLM
- Need to get started on cooperation and buy-in at the beginning of this 4-year plan
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- Suggestion to draft letter by workshop participants- have something concrete stating intent
- GFNMS take lead, maybe using BLM's partnerships, MOU, MOA
- NGOs can play role of influencing and advocating

Technical Advisor Committee:

- Strategy needs to be developed by GFNMS using stakeholder committee, Call advisory committee not technical:
- Proposal to have one TAC: drawing from areas of expertise but having all in same group
- Invite user groups to be on committee
- Use people on the ground, public management

Question: What *information gaps need to be addressed from a monitoring perspective?*

Answer:

- Widely distribute violation report- as part of permit process
- Data is anecdotal now, needs to be published, best data set is Alcatraz: Difficulty is monitoring for rare events, need 100s of man hours
- Clearly establish the problem to convince the "doubters"/regulators/stakeholders
- Monitoring is key to enforcement- identify who is causing disturbance
- Gaps are colonies where there is no monitoring
- There are coastal sites that may be opened to public
- It's been 16 years since colonies were mapped
- Standardizing data collection during disturbances
- Data gap is estimation of distances that cause disturbances, lots of variables
- How does one estimate 1000 ft? Need to help with this (land features?)
- What are your priorities when documenting disturbance?